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**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/043,268	05/07/98	VAN KESSEL	L 294-44

RONALD J BARON
HOFFMAN & BARON
350 JERICO TURNPIKE
JERICO NY 11753

IM31/1208

EXAMINER
WALLS, D

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 12/08/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/043,268

Applicant(s)
Van Kessel et al.

Examiner
Dionne A. Walls

Group Art Unit
1731



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-10 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-3 and 5-10 is/are rejected.

☒ Claim(s) 4 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Objections

2. Claim 4 is objected to under 37 CFR 1.75 as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-3, 5-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 2 and 3, it is not clear whether the reference to the starch and protein constituents are in addition to the "flour components" as stated in claim 1 or whether the

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reference to the starch and protein components are actually the “flour components” as stated in claim 1.

5. Regarding claim 5, applicant states that flour is subjected to a “treatment” known in the paper industry, but it is not clear what type of treatment applicant intends because there is no recitation of the steps for treating/processing the flour.

6. Regarding claim 8, the phrase “preferably” renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Also, it is not clear what applicant intends when referring to feeding fraction (a) “to the usual fiber mass”. Additionally, applicant refers to fiber-reinforcing additives being “introduced”, but it’s not clear where these additives are being introduced. Finally, the use of the phrase “processed completely” is confusing because it is not certain what this language pertains to.

7. Claims 9 and 10 provide for the “ use of unseparated flour components”, but, since the claims do not set forth any steps involved in the method/process of making paper with unseparated flour components, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

8. Additionally, claims 9 and 10 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35

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U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). These claims cannot be further examined because the essential steps comprising the methods of using these articles are missing.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-2, and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ware et al (U.S. Pat. No. 3,859,108).

11. Claim 1 is drawn to a paper comprising the components of flour in the paper fiber matrix. Ware et al discloses such a paper with flour (starch and protein) components (see Abstract).

12. Claims 2 is drawn to paper comprising flour components wherein starch comprises .1-8 wt. % and protein comprises .3-2.4 wt. % in the paper fiber matrix. Ware et al discloses paper comprising flour with a starch/protein ratio of at least 2:1 (column 6, lines 51-53) and an 8 % corn-flour size (Example 11) which results in a starch/protein ratio that is within this range.

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13. Claims 5 is drawn to a method for manufacturing paper wherein at least flour is subjected to a treatment known in the industry after which the treated components of flour are jointly introduced into the paper fiber matrix. Ware et al discloses such a process wherein proteinaceous flour is subjected to a treatment process and then added to paper. (see Abstract).

14. Claim 6 is drawn to a method for manufacturing paper wherein the flour is treated with a chemical and/or starch chain-degrading agent and is then introduced in the paper fiber matrix using a size press. ^{Ware}~~Davidson~~ et al discloses such a method wherein the flour is subjected to the action of hydrogen peroxide or an enzyme and then introduced to the paper (see Abstract).

15. Claim 7 is drawn to a method for manufacturing paper wherein the protein fraction of the flour is rendered water-soluble. ^{Ware}~~Davidson~~ et al discloses such a method wherein the protein fraction retains the properties possessed by soluble proteins in solution (column 4, lines 61-64).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ware et al. Claim 3 is drawn to paper comprising flour components wherein starch comprises 2-5 wt. % and protein comprises .2-1 wt. % in the paper fiber matrix. Ware et al discloses paper comprising flour

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components which contain a starch/protein ratio of at least 2:1 (column 6, lines 51-53) and an 8 % corn-flour size (Example 10). While Ware et al does not disclose the precise weight ranges, it would have been obvious to one with ordinary skill in the art at the time the invention was made to utilize flour with slightly different protein/starch compositions as long as it contained the same starch/protein ratio as taught in Ware et al. To do so would only satisfy the very purpose of using unseparated flour components in the manufacturing of paper - which is to reduce processing costs, to minimize waste flows and to conserve raw materials and energy.

18. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ware (U.S. Pat. No. 3,859,108) in view of Schober (European Patent Application No. 0,554,659). Claim 8 is drawn to a method of manufacturing paper wherein vegetable material is processed by separating the vegetable material into a cellulose fraction and a starch/protein fraction, feeding the cellulose fraction to the usual fiber mass and feeding the starch/protein fraction into the paper fiber mix. Ware et al discloses a process wherein proteinaceous material flour is processed to remove the cellulosic portion from the protein/starch portion - the protein/starch portion being introduced into the paper/fiber matrix (column 5, lines 29-39. See also Abstract). While Ware does not disclose a process wherein the cellulose portion is fed to the fiber mass, Schober discloses a process wherein the cellulosic portion of vegetable material (husks, peels) are added to the raw paper mass which is to be incorporated into the finished paper product (page 3, lines 1-7; page 4, lines 24-28). It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of Ware and Schober because to do so would do no more

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than help lower the costs involved in producing paper and create an more environmentally-friendly paper process - which is the goal of both inventions.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

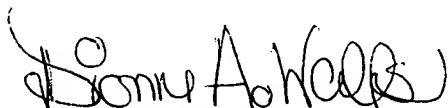
- Davidson et al. (U.S. Pat. No. 1,622,496)

- Puydak (U.S. Pat. No. 3,166,466)

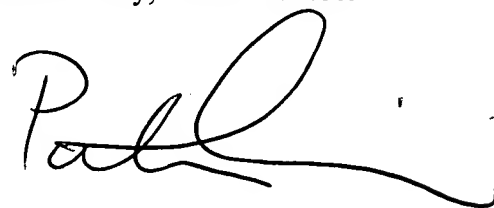
Both of these patents relate to the use of protein/starch flour components as an agent to improve the strength of paper/cellulose-fiber products.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dionne A. Walls whose telephone number is (703) 305 - 0933. The examiner can normally be reached Monday-Thursday from 6:30AM - 4:00PM (EST). The examiner can also be reached on alternate Fridays.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached at (703) 308-3837. Additionally, the fax number for this Group is (703) 305-7115.


Dionne A. Walls

December 1, 1998


PETER CHIN
PRIMARY EXAMINER